Amendment to the Specification

Please replace Para. 0015 of the specification with the following:

[0015] FIG. 3 illustrates an embodiment of a brake by wire brake control system 100 of the present invention. Described generally, brake control system 100 and its constituent parts comprise a fail-silent brake control system, such that it either provides the correct brake control command and result at the correct time, or it provides no control result at all. Brake control system 100 generally comprises two substantially identical supervisory brake controllers 120,122 and a monitoring controller 123. Controllers 120,122,123 may be incorporated into a single controller as separate control modules or portions thereof. However, it is believed to be preferred to implement controllers 120,122,123 as shown in FIG. 3 as separate and distinct controllers or control modules to provide additional protection against common mode events. Each of supervisory controllers 120,122 is adapted to control the braking of a pair of road wheels 126,128,130,132. The embodiment shown in FIG.3 illustrates a front pair/rear pair arrangement. Supervisory controller 120 is adapted to control the braking of the pair comprising right front road wheel 126 and left front road wheel 128 and supervisory controller 122 is adapted to control the braking of the pair comprising right rear road wheel 130 and left rear road wheel 132. Braking of road wheels 126,128,130,132 is performed through the operation of their respective brake control units 134,136,138,140. Supervisory controller 120 is in signal communication with brake control units 134,136 through a first brake control bus 142 to which it is operatively connected. Supervisory controller 122 is in signal communication with brake controls 138,140 through a second brake control bus 144 to which it is operatively connected. As used herein, the term operatively connected is intended broadly to comprise all of the connections, including mechanical, electrical, optical or other connections, necessary to enable the operation of one constituent element of system 100 with another. The term signal communication is intended to encompass all forms of signals and methods of communicating signals from one element of system 100 to another. Supervisory controllers 120,122 and monitoring controller 123 are each in signal communication with one another through controller bus 146 and are each operatively connected to it. Brake control system 100 also comprises a brake actuation device 148, such as brake pedal 150. Brake pedal 150 is operatively connected to a plurality

of brake sensors 152 for sensing an operator input, such as brake sensors 154, 156 and 158. Brake sensors 154,156,158 are each in signal communication with and operatively connected to brake actuator module 160 which is adapted to receive unprocessed signals from brake sensors 154,156,158 and produce a processed brake signal 162 therefrom. Brake actuation module 160 is operatively connected to a signal line which is also operatively connected to each of controllers 120,122,123, such that brake actuation module 160 is in signal communication and adapted to provide processed brake signal 162 to each of controllers 120,122,123. Brake sensors 154,156,158 are each also operatively connected to raw or unprocessed sensor signal lines 164,166,168, respectively which are also operatively connected to controllers 120,122,123, respectively, such that each is in signal communication with its respective controller and is adapted to provide its respective raw sensor signal 170,172,174, thereto. It is preferred that system 100 also incorporate brake control cutoff module 176. Brake control cutoff module 176 is operatively connected to at least one controller signal line 178 which is also operatively connected to controlling monitor 123, such that controlling monitor 123 is in signal communication with and adapted to provide a control input to brake control cutoff module 176. Brake control cutoff module 176 is also operatively connected to a first brake control signal line 180 which is also operatively connected to each of the respective ones of the first pair of brake control units 134,136 such that brake control cutoff module is in signal communication with and adapted to provide an output signal to the first pair of brake control units 134,136. Brake control cutoff module 176 is also operatively connected to a second brake control signal line 182 which is also operatively connected to each of the respective ones of the second pair of brake control units 138,140 such that brake control cutoff module is in signal communication with and adapted to provide an output signal to the second pair of brake control units 138,140. It is believed that control system 100 of the present invention may also be adapted to implement certain features of the control system and method disclosed in related, commonly assigned, co-pending US patent application Serial No. 10/823,170 ~~—/———— (Attorney Docket No. GP-303743)~~ filed on even date herewith, which is hereby incorporated herein by reference in its entirety.